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TRANSMITTAL FORM

Application Serial Number	10/055,565
Filing Date	October 26, 2001
First Named Inventor	Zilles
Group Art Unit	2173
Examiner Name	Not yet assigned
Attorney Docket No.	MIT-051CN2
Patent No.	Not applicable
Issue Date	Not applicable

ENCLOSURES (check all that apply)

☐ Fee Transmittal Form
  ☐ Check Attached
  ☐ Copy of Fee Transmittal Form

☐ Amendment/Response
  ☐ Preliminary
  ☐ After Final
  ☐ Affidavits/declaration(s)
  ☐ Letter to Official Draftsperson including Drawings
  [Total Sheets ___]

☐ Petition for Extension of Time

☒ Supplemental Information Disclosure Statement
  ☒ Form PTO-1449
  ☒ Copies of IDS Citations (A148-A154 & C61-C108)

☐ Certified Copy of Priority Document(s)

☐ Sequence Listing submission
  ☐ Paper Copy/CD
  ☐ Computer Readable Copy
  ☐ Statement verifying identity of above

☐ Copy of Notice to File Missing Parts of Application

☐ Formal Drawing(s)

☐ Request For Continued Examination (RCE) Transmittal

☐ Power of Attorney (Revocation of Prior Powers)

☐ Terminal Disclaimer

☐ Executed Declaration and Power of Attorney for Utility or Design Patent Application

☐ Small Entity Statement

☐ CD(s) for large table or computer program

☐ Amendment After Allowance

☐ Request for Certificate of Correction
  ☐ Certificate of Correction (in duplicate)

☐ Notice of Appeal to Board of Patent Appeals and Interferences

☐ Appeal Brief (in triplicate)

☐ Status Inquiry

☒ Return Receipt Postcard

☒ Certificate of First Class Mailing under 37 C.F.R. 1.8

☐ Certificate of Facsimile Transmission under 37 C.F.R. 1.8

☐ Additional Enclosure(s) (please identify below)
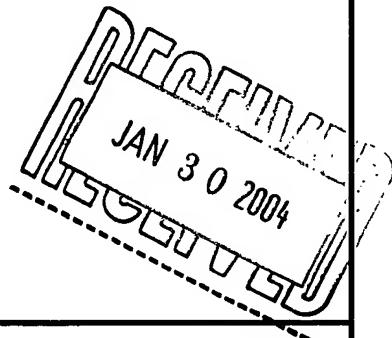
CORRESPONDENCE ADDRESS

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SIGNATURE BLOCK

Respectfully submitted,

Date: January 22, 2004
Reg. No.: 53,002
Tel. No.: (617) 310-8427
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William R. Haulbrook, Ph.D.
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3008760

PATENT
Attorney Docket No.: MIT-051CN2
(5473/53)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE RECEIVED

APPLICANTS: Zilles *et al.*   CONFIRMATION NO.:   8320

SERIAL NO.:   10/055,565   GROUP NO.:   2173

FILING DATE: October 26, 2001   EXAMINER: Not Yet Assigned

TITLE: METHOD AND APPARATUS FOR DETERMINING FORCES TO
BE APPLIED TO A USER THROUGH A HAPTIC INTERFACE

CERTIFICATE OF FIRST CLASS MAILING UNDER 37 C.F.R. 1.8

I hereby certify that this correspondence, and any documents referred to as enclosed herein, are being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 22nd day of January 2004.
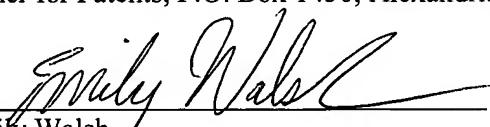
Emily Walsh

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith are:

1.)   Transmittal Form (1 pg.);
2.)   Second Supplemental Information Disclosure Statement (2 pgs.);
3.)   Form PTO-1449 (3 pgs.);
4.)   Copies of IDS Citations A148-A154 and C61-C108; and
5.)   Return Receipt Postcard.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: Zilles *et al.*   CONFIRMATION NO.:   8320

SERIAL NO.:   10/055,565   GROUP NO.   2173

FILING DATE: `October 26, 2001   EXAMINER   Not yet assigned

TITLE: METHOD AND APPARATUS FOR DETERMINING FORCES TO
                BE APPLIED TO A USER THROUGH A HAPTIC INTERFACE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with the provisions of 37 C.F.R. 1.97 and 1.98, Applicants hereby make of record the patents and publications listed on the accompanying Form PTO-1449, and other information contained herein, for consideration by the Examiner in connection with the examination of the above-identified patent application. Copies of the patents and publications are enclosed.

REMARKS

In accordance with the provisions of 37 C.F.R. 1.97, this statement is being filed:

☒ (1) within three (3) months of the **filing date** of a national application other than a continued prosecution application under 37 C.F.R. 1.53(d), or within three (3) months of the **date of entry of the national stage** as set forth in 37 C.F.R. 1.491 in an international application, or before the mailing of the **first Office action** on the merits, or before the mailing of a **first Office action** after the filing of a request for continued examination under 37 C.F.R. 1.114; or

☐ (2) after the period defined in (1) but before the mailing date of a final action or a notice of allowance under 37 C.F.R. 1.311, and

the requisite Statement is below, or
the requisite fee under 37 C.F.R. 1.17(p), namely $180.00, is included herein, or

☐ (3) after the mailing date of a **final action** or **notice of allowance** but before the payment of the **issue fee, AND**

the requisite Statement is below, **AND**

the requisite petition fee under 37 C.F.R. 1.17(p), namely **$180.00** is included herein.

It is respectfully requested that each of the patents and publications listed on the attached Form PTO-1449, and other information contained herein, be made of record in this application.

STATEMENT

As required under 37 C.F.R. 1.97(e), Applicant(s), through the undersigned, hereby state either that **[check the appropriate space only if either (2) or (3) is checked on the previous page <u>and</u> the Statement is required]**:

☐ 1.   Each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application **not more than three months** prior to the filing of the Information Disclosure Statement; or

☐ 2.   No item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing this Statement after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of the Information Disclosure Statement

Respectfully submitted,
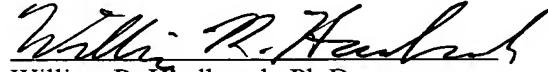
Date: January 22, 2004
Reg. No.: 53,002

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FORM PTO - 1449	ATTORNEY DOCKET NO.: MIT-051CN2	
SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT	APPLICANTS:	Zilles *et al.*
	SERIAL NO.:	10/055,565
	FILING DATE:	October 26, 2001
	GROUP:	2173

U.S. PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	A148	5,903,270	05/11/1999	Gentry et al.			
	A149	5,963,212	10/05/1999	Bakalash			
	A150	5,973,678	10/26/1999	Stewart			
	A151	6,064,394	05/16/2000	Morrison			
	A152	6,384,822 B1	05/07/2002	Bilodeau et al.	345	422	10/13/99
	A153	6,608,631	08/19/2003	Milliron			
	A154	2003/0117411	06/26/2003	Fujiwara et al.			

FOREIGN PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)

OTHER ART, JOURNAL ARTICLES, ETC.

EXAM. INIT.		OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)
	C61	"3-D Animation Workshop," printed 7/29/03, http://webreference.com/3d/, Lessons 39, 64-68, and 72; 79 pgs.
	C62	Alejandre, "What is a Tessellation?" The Math Forum, Drexel University, printed 07/29/03, http://mathforum.org/sum95/suzanne/whattess.html, 4 pgs.
	C63	Altmann, "About Nonuniform Rational B-Splines – NURBS," Worcester Polytechnic Institute, printed 7/29/03, http://www.cs.wpi.edu/~matt/courses/cs563/talks/nurbs.html, 6 pgs
	C64	Arraich, "Quick Mask," http://www.arraich.com/ref/aatool_quick_mask6.htm, 3 pgs.
	C65	Bentley, "Rendering Cubic Bezier Patches," Worcester Polytechnic Institute, printed 11/17/03, http://www.cs.wpi.edu/~matt/courses/cs563/talks/surface/bez_surf.html, 10 pgs.
	C66	Birn, "Tutorial: NURBS Head Modeling," printed 07/29/03, http://www.3drender.com/jbirn/ea/HeadModel.html, 5 pgs.
	C67	"Curves," Avid Technology, printed 11/06/03, http://www.iro.umontreal.ca/~roys/softimage/html/model/curves.html, chapter 10, 10 pgs.
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	C69	Feldman, "Texture Mapping," http://www.geocities.com/SiliconValley/2151/tmap.html (22pgs.)

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	C70	Fisher et al., "Pixel Values," http://www/dai.ed.ac.uk/HIPR2/value.htm (1 pg.)
	C71	Foskey et al, "*ArtNova:* Touch-Enabled 3D Model Design," Proceedings of IEEE Virtual Reality 2002, March 24-28, 2002, Orlando, Florida pgs. 119-126.
	C72	"Fundamentals of NURBS Modeling," Avid Technology, printed 11/06/03, http://www.iro.umontreal.ca/~roys/softimage/html/model/nurbs_basics.html, chapter 9, 7 pgs.
	C73	Gu et al., "Global Conformal Surface Parameterization," Eurographics Symposium on Geometry Processing (2003), 12 pgs.
	C74	"How to use Postscript Art as a Stencil in Photoshop," Swanson Tech Support, Photoshop Techniques 004, 4 pgs.
	C75	Komerska et al., "Haptic Interface for Center-of-Workspace Interaction: Demonstration Paper," Haptics Interfaces for Virtual Environments and Teleoperator Systems (2002), pp. 352-353.
	C76	Komerska et al., "Haptic Task Constraints for 3D Interactions, " Proceedings, IEEE Haptic Interfaces for Virtual Environments and Teleoperator Systems, (March 22-23, 2003), pp. 270-277.
	C77	Lenzmeier, "Color Depth and Color Spaces," http://www.csbsju.edu/itservices/teaching/c_space/colors.htm (3 pgs.).
	C78	"Lesson 12: Blur, Sharpen & Smudge," http://iit.bloomu.edu/vthc/Photoshop/enhancing/blurring.htm, 3 pgs.
	C79	"Lesson 14: Selection Tools," http://iit.bloomu.edu/vthc/Photoshop/BLENDING/selectiontools.htm, 7 pgs.
	C80	"Lesson 18: Opacity," http://iit.bloomu.edu/vthc/Photoshop/SpecialEffects/opacity.htm, 2 pgs.
	C81	"Lesson 22: Vector Shapes," http://iit.bloomu.edu/vthc/Photoshop/DRAWING/vectorshapes.htm (5 pgs.)
	C82	"Lesson 23: Gradients," http://iit.bloomu.edu/vthc/Photoshop/DRAWING/gradients.htm (7 pgs.)
	C83	"Lesson 19: Color Selection ," http://iit.bloomu.edu/vthc/Photoshop/DRAWING/colorpicker.htm (4 pgs.)
	C84	"Lesson 4: Layers," http://iit.bloomu.edu/vthc/Photoshop/Basics/layers.htm (2 pgs.)
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	C87	Miller et al., "The Design of 3D Haptic Widgets," Proceedings of the 1999 Symposium on Interactive 3D Graphics Conference Proceedings, (1999) pp. 1-6.
	C88	Nagel, "A Closer Look: Photoshop's New Paint Engine, Page 2 of 3," March 07, 2002, http://www.creativemac.com/2002/03_mar/features/ps7dynamics1.htm (6 pgs.).
	C89	Nagel, "A Closer Look: Photoshop's New Paint Engine, Page 3 of 3" March 07, 2002, http://www.creativemac.com/2002/03_mar/features/ps7dynamics1.htm (5 pgs.).
	C90	Nagel, "A Closer Look: Photoshop's New Paint Engine," March 07, 2002, http://www.creativemac.com/2002/03_mar/features/ps7dynamics1.htm (5 pgs.).
	C91	O'Rourke, "Comp.Graphics.Algorithms Frequently Asked Questions, Section 5. 3D Computations," http://www.exaflop.org/docs/cgafaq/cga5.html (13 pgs.).

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	C92	"Points, Nets, Patches…" printed 11/17/03, http://www.people.nnov.ru/fractal/splines/nets.htm, 2 pgs.
	C93	Porter et al., "Compositing Digital Images," Computer Graphics, Vol. 18, Number 3, July 1984, pgs. 253-259.
	C94	"Powerful Photoshop Layers: Layer Effects Settings, http://www/webreference.com/graphics/column32/5.html (5 pgs.).
	C95	"Raindrop Geomagic, Inc. product description for "Geomagic Shape," 10/3/03 printout, http://www.geomagic.com/products/shape, 2 pgs.
	C96	"Raindrop Geomagic, Inc. product description for "Geomagic Shape," 11/26/2003 printout, http://www.geomagic.com/products/shape, 2 pgs.
	C97	"Raindrop Geomagic, Inc. product description for "Geomagic Studio," http://www.macdac.com/raindrop/studio.htm (4 pgs.).
	C98	Rea, "Digital Photography and Electronic Imaging Glossary," Version 7.5.2 (August 2000), 40 pgs.
	C99	Rogers, "An Introduction to NURBS," Morgan Kaufmann Publishers, (2000), pp.1-4.
	C100	"Sensable Technologies, "Feature Overview," 11/25/03 printout, http://www.sensable.com/products/3ddesign/freeform/overview.asp, 5 pgs.
	C101	"Sensable Technologies, "Feature Overview: Emboss with Wrapped Image," 11/25/03 printout, http://www.sensable.com/products/3ddesign/freeform/emboss_with_wrap.asp, 1 pg.
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	C103	Sharman, "The Marching Cubes Algorithm," http://www.exaflop.org/docs/marchcubes/ind.html (6 pgs.).
	C104	Sorkine, et. al, "Bounded-distortion Piecewise Mesh Parameterization," Proceedings of the Conference on Visualization 2002, Boston, Massachusetts, pgs. 355-362.
	C105	"Surfaces, Avid Technology, printed 11/06/03, http://www.iro.umontreal.ca/~roys/softimage/html/model/surfs.html, chapter 11, 22 pgs.
	C106	"Tensor Product Spline Surfaces," printed 11/17/03, http://www.ibiblio.org/e-notes/Splines/Inter.htm, 3 pgs.
	C107	"Touch-Enabled 3D Model Design," Department of Computer Science, University of North Carolina at Chapel Hill (February 2002), 2pgs.
	C108	Weisstein, "Conformal Mapping," Wolfram Research, printed 11/11/03, http://mathworld.wolfram.com/ConformalMapping.html, 7 pgs.

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